

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013080**Date Inspected:** 27-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Wuzhi Cheng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

Bay 11, Bolt Tension Test.

This QA inspector witnessed the lot testing of the A325M High Strength Bolts to determine the torque values for the minimum tension required. Below is a list of the lots tested and the average torque values determined. Also witnessed the testing for rotational capacity on same lot numbers.

1. Bolt Lot No: NW941Z, size M22 x 85, RC Set# DHGM220096, Nut Lot No: NK671Z, Washer Lot No: C0428X and average torque value was 583 N-m.

Torque wrench was been used with Sr. No. 2#, Calibration Expiry date: March 10, 2011.

Skidmore Sr.No: 15865, Calibration Expiry date: June 01, 2010.

This QA notified ZPMC QC identified as Mr. Shen jian Bo and ABF inspector identified as Mr. David Wu are present during inspection.

OBG TRIAL ASSEMBLY

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This QA Inspector Randomly observed the following work in progress:

SEGMENT: 7AE-7BE, Panel Point(PP)#49~50, Bottom panel.

Shielded Metal Arc Welding (SMAW) welding of Repair weld joint OBE7B-003. Welder is identified as 066179. ZPMC Quality Control (QC) is identified as Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-SMAW-1G (1F) FCM-Repair-1. The repair welding was been performed against the Caltrans Engineer Approved Critical Welding Repair Report (CWR) No: B-CWR 1345 Rev. No:0 and American Bridge/Fluor (AB/F) UT report # UT-7E-037 dated: 03/21/2010.

SEGMENT: 7BE-7CE, PP #52~53, Side Panel, Bike Path side.

Shielded Metal Arc Welding (SMAW) welding of Repair weld joint OBE7B-010. Welder is identified as 062092. ZPMC Quality Control (QC) is identified as Mr. Zhang Qiang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-SMAW-1G(1F)FCM-Repair-1. The repair welding was been performed against the Welding Repair Report (WRR) No: B-WR 11359 Rev.No:0.

Shielded Metal Arc Welding (SMAW) welding of Repair weld joint OBE7-006. Welder is identified as 048659. ZPMC Quality Control (QC) is identified as Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-SMAW-3G (3F) FCM-Repair-1. The repair welding was been performed against the Welding Repair Report (WRR) No: B-WR 11323 Rev.No:0.

SEGMENT: 7CE, PP #53~54-Corner Assembly, Bike Path Side.

Shielded Metal Arc Welding (SMAW) welding of Repair weld joint CA010-063. Welder is identified as 050969. ZPMC Quality Control (QC) is identified as Mr. Zhang Qiang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345+485-SMAW-3G (3F) Repair-1. The repair welding was been performed against the Welding Repair Report (WRR) No: B-WR 11081 Rev.No:0.

SEGMENT: 7BE-7CE - PP#52-53, Bottom panel.

This QA Inspector observed ZPMC MT Technician Mr. Xu Hai was performing Magnetic Particle Testing (MT) for Bottom panel T Rib Holdback fillet welds at SEGMENT: 7BE-7CE - PP#52-53.

The attached photographs provide additional detail.

SEGMENT: 7AW, PP#48, Counter Weight side.

This QA Inspector observed American Bridge/Fluor (AB/F) QA Inspector Mr. Shi Diao was performing Magnetic Particle Testing (MT) for Longitudinal Diaphragm Holdback fillet welds at SEGMENT: 7AW PP#48, W3

Location.

The attached photographs provide additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Prabhu,Surendra	Quality Assurance Inspector
<b>Reviewed By:</b>	Miller,Mark	QA Reviewer

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